



AMENDMENT TO CLAIMS

1 (currently amended). A method for analyzing the energy content of an electrical signal for detecting voice, said method comprising the steps of:

- (a) digitizing the signal;
- (b) defining a first count [threshold] and a second count [threshold], wherein the first count [threshold] is greater than the second count [threshold];
- (c) comparing the digitized signal with the first count [threshold] and the second count [threshold] to produce a number representative of the comparison;
- (d) repeating steps (b) and (c) to produce a plurality of numbers;
- (e) converting the plurality of numbers into a first sum; and
- (f) comparing the first sum to a third count [threshold], wherein a sum exceeding the third count [threshold] is indicative of a voice signal.

2 (original). The method as set forth in claim 1 wherein said converting step includes the steps of:

- weighting each number representative of a comparison; and
- summing the weighted numbers.

3 (original). The method as set forth in claim 2 wherein larger numbers receive greater weight than smaller numbers to produce a quasi-RMS calculation.

4 (currently amended). The method as set forth in claim 1 and further including the steps of:

- counting the number of numbers that exceed the first count [threshold];
- comparing the number to a fourth count [threshold]; and
- indicating a voice signal when the first sum exceeds the third count [threshold] and the number exceeds the fourth count [threshold].

5 (currently amended). The method as set forth in claim 1 and further including the steps of:

- counting the number of numbers that exceed the first count [threshold];
- comparing the number to a fourth count [threshold]; and

increasing the first count [threshold] when the number is greater than the fourth count [threshold].

6 (currently amended). The method as set forth in claim 1 and further including the steps of:

counting the number of numbers that are less than the second count [threshold];

comparing the number to a fourth count [threshold]; and

decreasing the second count [threshold] when the number is less than the fourth count [threshold].

7 (currently amended). The method as set forth in claim 6 and further including the step of:

not counting the number of numbers that are less than the second count [threshold] while the first sum exceeds the third count [threshold].

8 (original). The method as set forth in claim 1 wherein comparing step (c) uses only the m most significant bits of the digitized signal.

9 (original). The method as set forth in claim 8 wherein $m = 6$.

10 (currently amended). A method for providing a digital representation of the energy content of an electrical signal, said method comprising the steps of:

(a) digitizing the signal;

(b) defining a first count [threshold] and a second count [threshold], wherein the first count [threshold] is greater than the second count [threshold];

(c) comparing the digitized signal with the first count [threshold] and the second count [threshold] to produce a number representative of the comparison;

(d) repeating steps (b) and (c) to produce a plurality of numbers;

(e) converting the plurality of numbers into a sum.

11 (original). The method as set forth in claim 10 wherein said converting step includes the steps of:

weighting each number representative of a comparison; and
summing the weighted numbers.

12 (original). The method as set forth in claim 11 wherein larger numbers receive greater weight than smaller numbers to produce a quasi-RMS calculation.

13 (currently amended). In a telephone including a receive channel, a transmit channel, an echo canceling circuit coupled between the receive channel and the transmit channel, and a state processor, the improvement comprising:

a voice activity detector having an input coupled to one channel, an output coupled to said state processor, and means for statistically analyzing a signal on said input by detecting the number of times a digitized input signal is within a preset, adjustable range of magnitude ~~[without measuring amplitude or power]~~.

14 (previously presented). The telephone as set forth in claim 13 wherein said means includes:

means for sampling said signal to produce a plurality of samples;

means for comparing each sample with at least one threshold to produce a number representative of each comparison;

means for summing the numbers representative of each comparison,

means for comparing the sum with a threshold and producing an indication of whether or not the threshold is exceeded, thereby indicating the presence of voice in said signal.

15 (previously presented). The telephone as set forth in claim 14 wherein said means for sampling is a analog to digital converter.

16 (previously presented). The telephone as set forth in claim 13 wherein said means includes:

means for comparing the signal with at least one threshold to produce a number representative of each comparison;

means for sampling said number to produce a plurality of samples;

means for summing the numbers representative of each comparison,

means for comparing the sum with a threshold and producing an indication of whether or not the threshold is exceeded, thereby indicating the presence of voice in said signal.

17 (previously presented). The telephone as set forth in claim 13 wherein said telephone is a speaker phone.